

Gardening Talking Points

There are many health benefits to gardening and consuming the vegetables that you grow, even when the soil contains some heavy metals. We think the health benefits of growing and eating fresh vegetables outweighs the risks posed by the metals, especially when measures are taken to minimize or eliminate the exposure to metals in the soil.

Heavy metals in soil are only a risk when swallowed (i.e. they don't absorb through skin, and even in dusty, windy conditions, the particle sizes stirred up into the air are too large to get into lungs); concentrations of metals in plants are usually much less than concentrations in the soil.

Studies have shown that the bulk of metals exposure from gardening comes from direct consumption of soil (hand to mouth activities and inadequate washing of soil off of vegetables before consumption) rather than from the vegetables themselves.

There are many things gardeners can do that reduce their exposure to metals in soil. We have a fact sheet called "Healthy Gardening" posted on our website ([link](#)) that explains our advice. I can talk about this advice on the show (place garden away from drip line of roof, wash hands after gardening and don't track soil into the house, wash vegetables before eating them, use mulch and groundcover, water with drip lines at base of plants, use soil amendments like compost, etc.)

Only a fraction of the total heavy metals in soil are absorbed when soil is swallowed

There are additional details we have learned from soil chemistry scientists over the past week that we are in the process of writing up in a fact sheet and posting to our website. Here is a sneak preview of those details:

- Organic material (like compost) in soil converts the toxic hexavalent chromium back into the much less toxic, essential nutrient trivalent chromium (in other words it converts chromium 6 to chromium 3).
- Organic material in soil also binds up heavy metals so that they are much less bioavailable to plants and humans (plants are less able to take them up from soil and humans absorb less from any soil they swallow).